ABSTRACT OF THE DISCLOSURE

A deposition method includes forming a nucleation layer over a substrate, forming a layer of a first substance at least one monolayer thick chemisorbed on the nucleation layer, and forming a layer of a second substance at least one monolayer thick chemisorbed on the first substance. The chemisorption product of the first and second substance may include silicon and nitrogen. The nucleation layer may comprise silicon nitride. Further, a deposition method may include forming a first part of a nucleation layer on a first surface of a substrate and forming a second part of a nucleation layer on a second surface of the substrate. A deposition layer may be formed on the first and second parts of the nucleation layer substantially non-selectively on the first part of the nucleation layer compared to the second part. The first surface may be a surface of a borophosphosilicate glass layer. The second surface may be a surface of a rugged polysilicon layer. The first and second part of the nucleation layer may be formed simultaneously.